

EXPEDITED PROCEDURE - EXAMINING GROUP 2815

S/N 09/584,566

PATENT

(HE)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Leonard Forbes et al.

Examiner: Jerome Jackson, Jr.

Serial No.:

09/584,566

Group Art Unit: 2815

Filed:

May 31, 2000

Docket: 303.691US1

Title:

HORIZONTAL MEMORY DEVICES WITH VERTICAL GATES

T.Flace

<u>AMENDMENT & RESPONSE UNDER 37 C.F.R. § 1.116</u>

Box AF Commissioner for Patents Washington, D.C. 20231

In response to the Final Office Action mailed October 18, 2001, please amend the application as follows:

IN THE CLAIMS

Please substitute the claim set in the appendix entitled Clean Version of Pending Claims for the previously pending claim set. The substitute claim set is intended to reflect amendment of previously pending claims 1, 7, and 14. The specific amendments to individual claims are detailed in the following marked up set of claims.

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1. (Amended) A memory cell, comprising:

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a source region in a horizontal substrate;

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- a drain region in the horizontal substrate;
- a channel region separating the source and the drain regions;

an edge-defined vertical floating gate <u>having sub lithographic dimensious</u> located above a portion of the channel region and separated from the channel region by a first thickness insulator material; and

at least one edge-defined vertical control gate <u>having sub lithographic dimensions</u> located above another portion of the channel region and separated therefrom by a second thickness insulator material, wherein the at least one vertical control gate is parallel to and opposing the vertical floating gate, and wherein the at least one vertical control gate is separated from the vertical floating gate by an intergate dielectric.